

**DEVICE AND METHOD FOR MONITORING BODY FLUID AND
ELECTROLYTE DISORDERS**

ABSTRACT OF THE DISCLOSURE

Devices and methods for measuring body fluid-related metric using spectrophotometry that may be used to facilitate diagnosis and therapeutic interventions aimed at restoring body fluid balance. In one embodiment, the present invention provides a device for measuring a body-tissue water content metric as a fraction of the fat-free tissue content of a patient using optical spectrophotometry. The device includes a probe housing configured to be placed near a tissue location which is being monitored; light emission optics connected to the housing and configured to direct radiation at the tissue location; light detection optics connected to the housing and configured to receive radiation from the tissue location; and a processing device configured to process radiation from the light emission optics and the light detection optics to compute the metric where the metric includes a ratio of the water content of a portion of patient's tissue in relation to the lean or fat-free content of a portion of patient's tissue.

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